Bronson (E. B.)

THE OBJECTS

OF

DERMATOLOGICAL CLASSIFICATION,

WITH

ESPECIAL REFERENCE TO AUSPITZ'S SYSTEM.

BY

EDWARD BENNET BRONSON, M.D.,

Professor of Dermatology in the New York Polyclinic.

[*Reprinted from the* JOURNAL OF CUTANEOUS AND VENEREAL DISEASES, Vol. II., Nos. 6 and 7, 1884.]

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IN framing a natural classification of skin diseases, a great difficulty arises from the fact that a large proportion of the affections of the skin are the incidental effects of processes more or less general which originate outside the cutaneous economy. To construct a classification that will exhibit all the morbid reactions to which the skin is liable in their most essential relations to each other involves the necessity of recognizing two separate and dissimilar factors, to wit: a local pathological process which is cutaneous, and also, in many cases, a remoter and vastly more complex process upon which the local process depends. To reconcile these two factors has been the chief problem of the so-called natural classifications of modern times. It would be easy to evade the difficulty by seizing one or the other horn of the dilemma. The Hippocratists who regarded all skin affections as mere out-croppings of internal disease ignored the one; while the Willanists, who were content to classify only the local lesions of the skin, disregarded the other factor. Between these extremes there lies an intermediate course which it has been the aim of modern classifications with greater or less success to pursue. Still, where

diseases are concerned which are not purely idiopathic, no reconciliation is possible without the necessity of one factor taking precedence over the other. Each group must be denominated according to one or the other principle of classification. Either the local process or the general process must be considered first, depending not so much upon which is the more essential where both constitute conditions *sine qua non*, but rather upon the intention of the classification. If it be the object to exhibit cutaneous diseases in their relations to general pathology, the general process will take precedence, while if the intention be rather to present the local conditions under which dermatoses may arise, the local process will be first considered. Which method is the preferable one is a matter mainly of expediency.

No classification since Hebra's has tended so much to advance the nosology of skin diseases as the system proposed a few years ago by Heinrich Auspitz.[1] Among the many classifications of the present day it stands *facile princeps*. None hereafter proposed can afford to ignore the work which it has accomplished. In this system, so far at least as the acuter forms of disease are concerned, a sharp distinction is made between diseases that are primary and those that are secondary. In the arrangement of the latter class of affections it is always the *general process* that is made predominant. It will be the purpose of this essay, first, to inquire in how far the method here adopted serves to fairly exhibit the most essential relations of cutaneous diseases; and second, to urge the advantages of a method that, while recognizing the remoter relations of pathology, yet gives precedence to the local process.

The first class in Auspitz's classification has received the designation of "Simple inflammatory processes of the skin—dermatitides simplices"—and is divided into "catarrhal" and "phlegmonous" dermatitides. The first division embraces "diffuse catarrhs of the skin" including simple or idiopathic erythema, and eczema; "erosive catarrhs" or "*stigmatoses*," including various superficial forms of inflammation due to erosion of the epidermis, whether by animal parasites or by other forms of traumatism; "follicular catarrhs," including *miliaria* (*alba et rubra*), *acne* and *sycosis;* and finally, "engorgement catarrhs," including *ecthyma* and *ulcera cutanea*. The second division embraces "stratified" (*Schichten*) "phlegmons of the skin," including *combustio, congelatio,* and *pseudo-erysipelas;* "circumscribed" (*Herd*) "phlegmons," including furuncle, anthrax, Aleppo and Biskra boils; while last of all we have *phlebitis et lymphangitis cutis* and erysipelas, under the designation of "engorgement phlegmons of the skin." The inclusion of these commoner forms of disease in a separate class appears at first sight natural

[1] System der Hautkrankheiten. Wien, 1881.

and proper, and had the adjective *common* instead of "simple" been used to designate them, the intent of the division could not have been mistaken. This, however, would not have interpreted the author's meaning. The diseases of this class by no means include all dermatitides of a common type of inflammation, and, on the other hand, many of the same types of inflammation represented here reappear afterwards under other heads. The antithesis to the term *simple* must be sought in the definitions given to other classes in which inflammatory diseases appear. These are angioneurotic (Class II.), neuritic (Class III.), and engorgement dermatoses (Class IV.).

Angioneurotic dermatoses are defined to be "dermatoses having the character of a general disturbance of vascular tension associated with a more or less pronounced inflammatory fluxion to the cutaneous surface." In other words, they are dermatoses secondary to general disease which furnishes the condition essential to their development, and doubtless also impresses upon them certain special characters.

Neuritic dermatoses are "dermatoses due to disease of sensory (and at the same time trophic?) nerve elements;" while engorgement dermatoses are "dermatoses which have the character of a passive disorder of the circulation with impairment of the venous and lymphatic absorption." These definitions clearly imply an etiological division, though at the same time suggesting incidentally certain peculiar forms of morbid activity. The groups of diseases which they define are essentially symptomatic (or at least deuteropathic) diseases. The inference is that "simple inflammations of the skin" are *idiopathic* inflammations—inflammations that are the natural and immediate effect of a local irritation sufficient in degree to disturb the normal processes of nutrition. Some exception might be taken to this division on the score that certain of the affections of this group do not always bear this simple character. Erysipelas, for example, is by no means always idiopathic, and it is not easy to see why acne vulgaris is not entitled to representation under the angioneuroses as well as eczema.

The characterization of the affections of the second family of this class as "erosive" catarrhs or "stigmatoses," is ingenious and, with respect to some of them, felicitous. It is questionable, however, if in all cases it is an *erosion* which is the chief element in the disease. Under the parasitic forms are included "*entomoses*" from lice, bugs, fleas, and mosquitos, and "*acarinosi*" from *leptus, acarus folliculorum, acarus scabiei*, etc., some of which erode the epidermis, some merely perforate it, while others simply enter the follicles without any disturbance of the epidermis whatever. The lesions caused by them vary in still greater degree. Some differ in no respect from the efflorescences of urticaria, some consist of a papular erythema, others assume the form of a pustular

eczema; while in other cases the only effects are either the result of scratching or absolutely nil. It would seem then that the erosion could play but an insignificant part in all these diverse manifestations. In the case of the mosquito, something more than the simple perforation of the epidermis with the fine *setæ* of the insect is necessary to account for the intense irritation and decided wheal which is almost invariably caused by the bite. Though no poison gland has ever been discovered, the possibility of a poisonous saliva has been suggested. Similar explanations may apply to others. But, however they are to be explained, the effects produced in these different forms of parasitic disease are so various that the question arises whether Auspitz, in condemning the association of *mycoses* with *entomoses* and *acarinosi* under the common head of parasitic diseases of the skin, on the score of disparity in the pathological processes, has not committed the very error he sought to escape.

The second class—angioneurotic dermatoses—embraces all the so-called *exanthemata,* all toxic eruptions, and what are termed "essential angioneuroses of the skin" including, beside *erythema multiforme, iris, et nodosum,* several varieties of herpes; "eczematous and pemphigoid efflorescences fundamentally of angioneurotic nature;" *purpura rheumatica; cnidosis* (chronic urticaria), and *erythema angiectaticum* (*acne rosacea*). Extensive as this enumeration is, there is apparently no good reason why the list might not be greatly augmented. Reference has already been made to certain affections of Class I. which might be included here. The angioneurotic diseases of the skin are represented as being such affections as arise in consequence of an abnormal sensitiveness to inflammatory reactions. This excessive irritability often constitutes the sole evidence of the presence of the angioneurotic condition; as, for example, in the case of chronic urticaria. Now when we see an acute or subacute form of erythematous or papular eczema breaking out suddenly without obvious provocation, and extending rapidly over a large portion of the cutaneous surface, as in certain subjects it not infrequently does, it is not easy to see in what it differs from an essential angioneurosis. In fact, I see no sufficient reason why the larger portion of the acuter forms of eczema, which tend to greatly exceed the limits of the original area of irritation, are not essentially angioneurotic. Again, with regard to acne vulgaris, its predisposing causes bear a very close resemblance to those which predispose to acne rosacea, and I fail to see why in one case as well as in the other the intermediate condition between the general sources of the disease and the local manifestation in the skin should not be an angioneurosis. Again, there are certain non-inflammatory affections of the skin which, though clearly depending upon neurotic vascular disturbance, are yet excluded from the class of angioneurotic dermatoses without obvious

reasons. The affections which Schwimmer[1] terms "pure angioneuroses," comprising certain forms of anæmia and hyperæmia of the skin, such as simple rubor and pallor due manifestly to central nervous influence, receive no mention here. In their lighter forms they might be regarded as physiological rather than pathological; but when, as is sometimes the case, they become manifestations of disease of the nervous centres, they acquire a pathological significance.

Pemphigus, psoriasis, and pityriasis rubra are classed among the "anomalies of growth" under *Epidermidoses.* One of them, pemphigus, is also represented under the *angioneuroses,* under the somewhat vague phrase "pemphigoid efflorescences with an angioneurotic basis, such as occur in "hysterical" conditions "and the like." Hans Hebra, who, in his recent treatise,[2] has adopted Auspitz's classification with slight modifications, puts pemphigus vulgaris among the *angioneuroses,* while pemphigus foliaceus appears under *akanthoses,* apparently for the sole reason that the former is regarded as an inflammatory affection, the other not. But there is nothing in Auspitz's description of the angioneuroses of the skin to imply that inflammation is absolutely essential, else why was the class not denominated "inflammatory angioneuroses of the skin," or "angioneurotic dermatitides"? Though the angioneurosis is "attended with a more or less pronounced inflammatory fluxion to the skin," it is the predisposition to inflammation rather than the inflammation itself that characterizes the angioneurotic dermatosis. It is true the affections so described are in the main inflammatory diseases. But acne rosacea is by no means necessarily an inflammatory disease, and the same is true of purpura toxica, peliosis rheumatica, and doubtless of the "pemphigoid efflorescences." The fact remains, however, that the characterization of the class leaves a certain indefiniteness as to where its exact limits should be drawn. What might be termed an "inflammatory fluxion" is present in the acuter forms at least of pemphigus, of psoriasis, and of pityriasis rubra. Moreover, when they appear, as they often do, in the form of a recurring exanthem more or less generally over the whole body, with the character almost of an acute inflammatory disease, they lack few of the characteristics which are ascribed to the angioneurotic dermatoses. A similar observation might also be made regarding certain of the *steatoses* and *idroses* which are classed with the epidermidoses, notwithstanding the vascular "fluxion" that accompanies them falls short of inflammation.

But returning to the group of affections which Auspitz has included in the Second Class we are now considering, let us inquire in how far

[1] Die Neuropathischen Dermatonosen. Wien u. Leipzig, 1883.
[2] Die krankhaften Veränderungen der Haut. Braunschweig, 1884.

they conform to the definition given of angioneurotic dermatoses. Some of them, more especially those belonging to the family of "essential angioneuroses," fully meet the requirements. With regard to others, the case is not so clear. Thus in the case of the "toxic exanthemata," can we be sure that there is one general condition which is essentially the same for all? Can we assert that the pustule of iodism is the manifestation of a general morbid process identical with that which causes the erythematous eruption from copaiba or the purpura from phosphorus or salicylic acid? If we have the demonstrated fact of the elimination of iodine through the cutaneous follicles to account for the inflammation of the skin, why resort to the far-fetched hypothesis of an angioneurosis? It is by no means impossible that many of the drug rashes are due to direct irritation of the skin at the moment of elimination of the drug, thus allying them to "*dermatitides simplices.*" Others, such as the purpuric eruptions, might as easily be explained on the score of vitiated hæmatosis as upon the theory of neurotic disturbance.

Similarly with regard to the infectious exanthemata, admitting the presence of a general vaso-motor disturbance, it by no means follows that this disturbance is necessary to the concomitant skin disease. In this respect its importance is probably not always the same. While, in the prodromal eruption of variola, or in the diffuse redness of scarlatina, the presence of angioneurotic influence is too obvious to be denied, there are other forms of exanthem, such as the discrete follicular efflorescences of measles, or the complex trophic changes that constitute the mature efflorescences of variola, or the isolated lesion of vaccinia that are not so easily explained. The very diversity of the processes implies a cause more proximate, more immediate, more specific than a general angioneurosis. For aught we know, it is the direct action of the virus of these diseases upon the autonomy of the skin, which is the immmediate cause, sufficient in itself to account for the cutaneous phenomena, without resorting to any other hypothesis. Neumann[1] found that the chief pathological changes of the skin in measles were confined to the cutaneous glands and blood-vessels, while in scarlatina the changes were chiefly in the mucous layer of the epidermis and in the cutis directly underneath. In the former case, N. believed that the implication of the glands implied that it was by these avenues that the poison sought to escape from the body, while the pronounced involvement of the epidermis in scarlatina would serve to account for the contagious properties attaching to the products of desquamation in the latter disease. Thus we have some reason to believe that the catarrhal inflammations of measles and scarlet fever have an

[1] Ueber die histologischen Veränderungen der Haut bei Morbillen und Scarlatina. Med. Jahrb., 1882, 11.

analogy with the acne of iodism or bromism, differing in their mode of origin from the artificial eczema excited by a local irritant only in the direction from which the irritation proceeds. Something, doubtless, is to be attributed to the prediposing and modifying influence of neurosis, but how much is no less a matter of theory than the explanations offered above. One feature of these diseases, however, which is occasionally observed, namely the sudden recession of the exanthem, associated, as it usually is, with an exacerbation of the disease internally, might readily be explained in the same way as is the sudden disappearance of an eczema on the occurrence of a severe internal disorder, that is, upon the theory of substitutive irritation, the neurotic influence being the same in either case.

The III. Class, designated as "Neuritic Dermatoses," presents a group of diseases whose limitations are much more succinct and clearly defined than those of the class just considered. The only objection to it, in such a system as that adopted by Auspitz, is a purely practical one, based upon the fact that it repeats many forms of disease also included elsewhere, which, so far as the local effects are concerned, are precisely identical. After "*herpes neuriticus*" (zoster) and "*herpes febrilis*" (herpes facialis, herpes progenitalis), which comprise the first family, comes "*erythanthema neuriticum*," under which we have almost an exact repetition of the eruptions of "*erythanthema essentiale*." There is also an "*urticaria neuritica*," and then come atrophic and necrotic affections of neuritic origin. The "Engorgement Dermatoses" (Class IV.) constitute another well-defined division of diseases. They include certain anæmias and hyperæmias, also a family of *transudationes* (including *œdema cutis*) *elephantiasis arabum*, and *sclerema cutis, neonatorum et adultorum*), which are all characterized by incomplete stasis, and "engorgement necroses" in which the stasis is complete. Although certain of the affections which figure in this class might perhaps more properly be included elsewhere, that is purely a matter of individual judgment which in no wise affects the general design of the author's system. Thus, Hans Hebra prefers to class Raynaud's disease, which Auspitz has included here, under angioneuroses, attaching more importance to the neurotic character of the disease than to the prevailing condition of the blood-vessels. Objection also may be made to the inclusion here of œdema which is by no means necessarily nor usually associated with engorgement. Indeed it has been conclusively shown that mere prevention of the return flow of the blood is insufficient to produce œdema unless there is also impaired action of the sympathetic nerves. Moreover, œdema takes place under many different conditions. But doubtless the author has in this case regard solely to the lymphatic engorgement incident to the impaired function of the absorbents.

In establishing a class of "hemorrhagic dermatoses" (Class V.) Auspitz takes an unlooked-for departure from the general principles of his classification. It is only with processes, he declares, "*nicht um Befunde*," that his system is concerned. Though hemorrhage may in a narrow sense be regarded as a process, it is no more so than erythema, nor œdema, nor icterus, nor argyria. It represents no definite disease condition, it implies no etiological factor. It is at the best but a secondary process, an effect, a symptom, a *Befund*. In this class traumatism, defective hæmatosis, neurosis, engorgement, morbid conditions of the blood-vessels play the essential parts, and to them the symptom should be subordinate.

The next class (VI.)—"Idioneuroses of the skin"—is defined as "functional anomalies of the cutaneous nerves without trophic changes of the skin;" following this come the "Anomalies of growth" in two classes—"*Epidermidoses*" (Class VII.) and "*Chorioblastoses*" (Class VIII.)—both most admirably arranged upon an anatomical basis. The ninth and last class comprises the "*Dermatomycoses.*"

From this cursory review of the several classes of Auspitz's system it is easy to see that the pervading principle is an etiological one; not, however in the sense of dealing with causes that are remote and accidental or occasional, but causes that are inherent in and essential to the skin disease. The import of Auspitz's classification is very different from that of those etiological systems that divide the symptomatic affections of the skin in accordance with supposed relations to various constitutional diseases or diatheses. The relation of arthritism to cutaneous disease is a very different thing from that of a neurotic process that stands in direct physiological communication with the diseased organ. So also the ingestion of certain drugs may produce an exanthem upon the skin, but between the skin effect and the general intoxication the relation is not a constant or necessary one. It only becomes necessary when the constitutional effect calls in play a train of action capable of directly influencing the skin, namely an angioneurosis. Auspitz's method in the construction of his classes has been to regard first the sum total of the processes upon which the skin diseases depend, and then selecting from these processes those which are most essential and fundamental, to group the affections accordingly. The result has been an etiological division, rather as a necessary consequence of the method than from any original design on the author's part. The most essential pathological processes prove also to be those which stand in a proximate causative relation to the cutaneous affections. The method adopted by Hebra differed from this in that the skin affections were classified according to certain previously observed rules of general pathology. Auspitz's method reaches much farther and seeks to carry the inquiry to what may be termed the prime motives of disease.

But the question may be asked, Has the proposed plan been fully carried out in the scheme presented? Do the groups of Auspitz's system take cognizance of all the morbid conditions that may be prime motives of cutaneous disease? Simple (idiopathic) inflammations, angioneuroses, neuritic and engorgement dermatoses, idioneuroses, hæmorrhages, anomalous growths, and dermatomycoses, by no means express all the possible conditions under which diseases of the skin are liable to arise. The system, for example, might include a group of diseases due to defective constitutions of the blood (*hæmatoses*), embracing among other affections several of the cutaneous hæmorrhages; another group of affections due to abnormal blood deposits (*apostases*) including such diseases as uridrosis, icterus, and argyria, which, with questionable propriety, now appear among the *epidermidoses;* a group of zoonotic inflammations not due to general angioneurosis, but solely to the direct operation of the virus upon the tissues of the skin, and doubtless the list might be greatly increased. But perhaps Auspitz has carried out the principle as far as with our present knowledge is practicable. A more comprehensive classification might only result in confusion, and indeed while such a system might aid in more accurately expressing the etiological relations of skin diseases, the study of dermatology subjectively considered would be thereby but little furthered. The susceptibilities of the skin, its morbid tendencies, the reactions it exhibits in disease would yet remain to be classified.

This, however, is a phase of dermatology that is regarded by Auspitz evidently as of very subordinate importance. The fact is, that in his system the objects that are classified are not so much the skin affections themselves as the general morbid conditions that tend to the production of skin disease. No objection can be made on scientific grounds to such a classification; the only objection to it is on the score of its adaptability to the purposes of dermatological study. It is certainly a very liberal method of treating the subject, and tends to place the study of dermatology on a much higher plane than can any artificial classification based upon mere accidental points of similarity. Doubtless also too little attention has been paid in former classifications to the important bearing of neural conditions upon cutaneous disease. It is just and proper in those diseases of the skin that are secondary or symptomatic that we keep in view not only the local process, but also the larger process upon which the local process depends. But, on the other hand, while regarding predisposing conditions, we should not ignore those intermediate values that determine the local features and character of the cutaneous manifestations. Angioneurosis does not account for the fact that in one disease we have an erythema, in another a diffuse catarrhal affection, in another an affection of the follicles. It is admitted in the case of the exanthemata that the only immediate effect of the general vaso-motor disturbance is a

certain erethism of the blood-vessels, which supplies the predisposing element for the development of the more characteristic manifestations that follow. The reactions of the epidermis in scarlatina, of the follicles in measles, the pustular inflammation of variola, are effects between which and the angioneurosis lies an intermediate determining cause. It is just this property of the inflammatory process which unfortunately is most obscure, but which we would most desire to fathom. Moreover, the effects produced by general neural conditions often differ very slightly from effects produced by causes purely of an idiopathic nature. Thus comparing a traumatic with an essential erythema, if we confine our attention solely to the part affected, we cannot deny the marked similarity of the two processes. They differ apparently only in that one owes its origin to an internal source of irritation, the other to a topical one. In one case the angioparesis is propagated from a central or interior nervous disturbance, in the other it is the direct effect of the local injury. Auspitz's system compels us to segregate in different groups processes which, so far as the skin itself is concerned, are precisely identical. Such a system, however correct according to general principles of etiology or pathology, can scarcely be called strictly dermatological. When Auspitz compares the dermatology of the ancient humoralists to Marsyas flayed by Apollo, and calls it "dermatology robbed of the skin," we might return a reproachful *"Et tu, Brute?"*

It is doubtful if any one system is capable of giving due expression to all the matters of moment with which dermatology is concerned, and which it is desirable to comprehend in a logical arrangement. But under all circumstances it is necessary first to have in mind all the factors which make up the sum total of each disease process, and of these select as the basis of classification those that are most essential. A natural class will then consist of diseases that have the same essential factors in common. *But the factors that the diseases of any class have in common should be more essential than any factors which they have in common with diseases not in this class.* In all purely artificial systems this rule is constantly violated, as, for example, in the classifications of Mercurialis, Turner, and Alibert, where skin diseases are divided according as they affect the head or other regions of the body; the mere fact of topography being far less essential in the case of many of the diseases so divided than the characters which they have in common with each other.

But we have first to determine what the essential factors are. In an erythematous inflammation of the skin a prolonged derangement of the blood-vessels of the papillary layer is essential. In simple erythema this derangement owes its origin to a local disorder of the cutaneous nerves. In essential erythema the same derangement is the effect of angioneurosis; in *erythema neuriticum* of neuritis. In an herpetic inflammation of the skin, in addition to derangement of the blood-vessels, an implication of

the mucous layer of the epidermis is essential. In one form of this inflammation, according to Auspitz, the essential factor is angioneurosis; in another neuritis. But in both cases the characteristic feature of the cutaneous reaction is the same, namely, an implication, through what intermediate agency we do not know, of the mucous layer of the epidermis. Now comparing erythema with herpes, I submit that the anatomical factor that divides them is a more essential, a more vital one so far as the economy of the skin is concerned, so far as *diseases of the skin are concerned*, than can any factors be that divide different forms of erythema from each other or different forms of herpes from each other. The distinction, although an anatomical one, is not an artificial distinction, but inheres in the very nature of the diseases. Though it offers no present explanation, it states a vital fact which we must rely on future discovery to elucidate. The motives that determine one kind of inflammation to seat itself in the epidermis, another in the blood-vessels or their immediate vicinity, another in the cutis, another in the subcutaneous tissues remain comparatively unknown; yet it is clear that in the inception of these motives the tissues themselves play an important part. Even when the incentive to the local disturbance is central and conveyed to the skin by the nerves and blood-vessels, the character and physiognomy of the inflammation must be determined by something else, something that pertains to the autonomy of the skin and to its various anatomical elements.

The chief objection to a classification of the inflammatory diseases of the skin upon an anatomical basis is, that in inflammation anatomical divisions are rarely respected. The blood-vessels which complicate and form an indispensable part of the process undergo changes peculiar to themselves, and give rise to an exudation in their vicinity which tends to obscure the origin of the disease. If the primary seat of the inflammation be in a follicle, a peri-folliculitis soon complicates the process; if in the lymphatics, a diffuse phlegmon is the result; if, as in eczema, the disease proceeds from the mucous layer, erythema, infiltration of the cutis, and impairment of the cuticle soon evince the fact that the disturbance has overstepped its original limits. Vascular implication is a factor common to every inflammation, but where the efflorescences of a skin disease present under all circumstances a definite and more or less constant morphology, something more than general vascular or nervous disturbance is required for their explanation. Every separate structure that has a special function may also have its special inflammation. It is not unreasonable to suppose that many of the anomalies of growth of Auspitz's vii. and viii. classes, especially those attended with pronounced hyperæmia, have their counterparts in inflammatory diseases of the skin. In the one case the slowness of the process and the absence of disturbing vascular influence preserve the confines of the disease within the structure to which the disease properly belongs, while in the other the limits of

the original disturbance are soon obscured or erased. But in the latter case, though the image is blurred, certain characteristics of its physiognomy are sufficiently preserved to betray the specific character which it derives from the anatomical source of original irritation. It is clear, however, that we can take the changes observed in the pure anomalies of growth as the clue to the inflammatory diseases of the skin only in a general way. The latter often involve changes of so complex a character and so many of them are secondary and unessential that to express them in precise anatomical terms is a matter of some hazard. But, on the other hand, a number of the diseases included in Auspitz's "*Wachsthums-Anomalien*" which are classified anatomically, are attended with a degree of vascular disturbance that falls but little short of inflammation; while some of them (as for example, *lupus erythematosus, lichen planus, syphilodermata*, sometimes pemphigus, etc.) are unquestionably inflammatory. The histology and physiology of the skin, normal and pathological, are yet so imperfectly known that the hope for a classification that will perfectly represent the anatomical relations of all the affections of the skin must doubtless be long deferred. For the present, we must be content if we can so classify the cutaneous reactions in disease as to indicate the general direction in which the truth lies.

It would seem to be incumbent on the writer to offer some practical illustration of the method of dermatological classification which has been indicated above. To this end the appended scheme is presented.

A CLASSIFICATION OF DERMATOSES.

CLASS I.

Telangioses of the Skin.

Dermatoses chiefly characterized by anomalies pertaining to the capillary blood-vessels of the skin.

A.

Unattended with trophic changes in the surrounding tissues.

First Family.– Simple Angioses. Anæmias and Hyperæmias.

1. Anæmias:
   - Anæmia mechanica,
   - Anæmia ex hæmorrhagia,
   - Anæmia ex angiospasmo — pallor cutis,
   - Anæmia cachectica.

2. Hyperæmias:
   - *a.* Active;
     - *α.* Diffuse; Rubor (idiopathic and deuteropathic).
     - *β.* Macular; Roseola hyperæmica.
   - *b.* Passive;
     - *α.* General; Cyanosis.
     - *β.* Local; Livor.

Second Family.—Non-inflammatory Angioses attended with Effusions.—Cutaneous Ecchyses.

1. Hæmorrhages:
   - *a.* Traumatic;
     - Ecchymosis, Ecchymoma,
     - Purpura traumatica,
     - Purpura ab ictis insectorum.
   - *b.* Mechanical;
     - Purpura mechanica (thrombotica, etc.).
   - *c.* Congenital—due to hæmophilia.
   - *d.* Toxic; purpura toxica.

c. Neuropathic; P. neurotica, P. neuritica.
f. Diathetic or cachectic;
Purpura cachetica,
Purpura (peliosis) rheumatica,
Purpura hæmorrhagica,
Purpura scorbutica,
Purpura syphilitica.
2. Œdemas:
a. Œdema mechanicum.
b. Œdema neuroticum.
c. Œdema cachecticum.
3. Adventitious Effusions:
a. Of bile;
Icterus.
b. Of matters foreign to the organism;
Argyria, etc.

B.

Attended with trophic changes.

Third Family.—Inflammatory Angioses.

1. Erythematous;
(Idiopathic.)
a. Simple forms due to local irritation:
Erythema traumaticum (intertrigo, e decubitu, etc.),
Erythema venenatum,
Erythema caloricum,
Erythema et urticaria ab ictis insectorum.
(Deuteropathic.)
b. Simple deuteropathic forms:
α. Polymorphous;
Erythema multiforme (toxicum, essentiale),
Erythema iris (including herpes iris).
β. With spasm of blood-vessels and production of wheals;
Urticaria toxica,
Cnidosis [Bazin, Auspitz] (Urticaria recurrens).
γ. With deep-seated exudation;
Erythema nodosum.
c. Symptomatic forms:
α. Endemic form — Erythema of Pellagra.
β. Epidemic form—Erythema of Acrodynia.
γ. Leprous form — Erythema of Lepra.
d. Characterized by angiectasis and special localization;
Gutta rosacea:
α. Simple form—Erythema rosaceum.
β. Pustular form — Acne rosacea.
γ. Hypertrophic form—Gutta rosacea hypertophica.
e. Characterized by resulting atrophy;
Lupus erythematosus:
2. Roseolous;
a. Simple forms:
Roseola infantilis,
Roseola toxica, etc.
b. Symptomatic forms (exanthematous):
Roseola variolosa, vaccinica, cholerica, typhosa, etc.,
Roseola syphilitica,
Exanthem of measles.

Class II.

Angio-Epidermidoses.

Dermatoses characterized by trophic changes in the epidermis, together with marked derangement of the superficial blood-vessels.

First Order.

KERATOSES ANGIOTICÆ.

First Family.—Angiotic Parakeratoses.[1]

1. Diffuse;
   Psoriasis.
2. Follicular;
   Lichen ruber,
   Lichen circinatus (?).

Second Family.—Angiotic Keratolyses.[2]

Dermatitis exfoliation generalis (Pityriasis rubra),
Dermatitis exfoliativa partialis,
Dermatitis exfoliativa infantum.

Second Order.

ACANTHOSES[3] ANGIOTICÆ.

First Family.—Angiotic Hyperakanthoses.

1. Associated with marked inflammatory effusion in the papillary layer (Robinson[4]), and with parakeratosis.

   Lichen planus.

Second Family.—Angiotic Acantholyses.[3]

(Idiopathic.)

1. Artificial bullous dermatoses:
   Dermatitis ambustionis bullosa,
   Dermatitis congelationis bullosa,
   Dermatitis traumatica et venenata bullosa.

(Deuteropathic.)

2. Pemphigous dermatoses:
   Pemphigus acutus et chronicus,
   Pemphigus foliaceus,
   Impetigo herpetiformis,
   Herpes gestationis,
   Cheiro-pompholyx.

Third Family.—Herpetic Dermatoses.

Characterized by the formation of inflammatory vesicles in the stratum mucosum and dependent upon neural disease.

Herpes zoster,
Herpes facialis,
Herpes progenitalis,
Herpes phlyctenodes.

Fourth Family.—Eczematous Dermatoses.

1. Idiopathic and deuteropathic Eczema:
   a. With decided vascular disturbance;
   Eczema erythematosum.
   b. With especial implication of follicles;
   Eczema papulatum,
   Eczema folliculare [Kaposi].
   Eczema sudorale (lichen tropicus), E. sycosiforme.
   c. With abundant mucous or mucopurulent secretion;
   α. Vesicular—E. vesiculosum.
   β. Pustular—E. pustulum.
   γ. With erosion—E. madidans.
   d. Characterized by keratolysis or parakeratosis;
   Eczema squamosum.
   e. Characterized by acantholysis;
   Eczema rubrum, Eczema impetiginosum diffusum.

[1] From Greek παρά, beside, and κέρας, horn, signifying diseases characterized by the development of corneous tissue of a modified character.

[2] From Greek κέρας, horn, and λύσις, a loosing; signifying diseases characterized by excessive exfoliation of the stratum corneum (Auspitz).

[3] From Greek ἄκανθα, a prickle; signifying diseases of the prickle-cell layer of the epidermis. "Acantholyses" are diseases characterized by loosening or separation of the cells of the mucous layer of the epidermis (Auspitz).

[4] Lichen Ruber and Lichen Planus. By A. R. Robinson, M.D., New York, 1883.

f. With hyperacanthosis;
Eczema hypertrophicum epidermidis [Wilson]. (Including E. verrucosum, E. fissum).

g. With hyperdesmosis,[1] due to vascular engorgement:
Eczema induratum seu hypertrophicum cutis, E. spargosiforme [Wilson].

2. Eczematous affections modified by dermatomycosis:
Eczema marginatum.

3. Eczematous affections due to acarinosus:
a. From acarus scabiei.—Scabies.
b. From leptus autumnalis.
c. From acarus hordei, etc.

Fifth Family.—Impetiginous dermatoses.

1. Impetigo.
2. Ecthyma.

Sixth Family.—Exanthematous Epidermidoses.

1. Diffuse catarrhal exanthem associated with marked angioneurosis, and characterized by keratolysis:
Exanthem of scarlatina.
2. Simple vesicular or vesiculo-pustular exanthems:
Miliaria (crystallina),
Exanthem of varicella.
3. Vesicular pustular exanthems with following phlegmonous (diphtheritic) inflammation:
Exanthem of variola,
Exanthem of vaccina.

CLASS III.

Cryptoses[2] of the Skin.

Diseases affecting the Cutaneous Follicles.

A.—Functional.

First Order.

STEATOSES.

First Family.—Hypersteatoses (A[3]).

Seborrhœa { oleosa. / crustosa.

Second Family.—Asteatoses (A).

Xeroderma { congenita. / acquisita.

Second Order.

IDROSES (A).

First Family.—Hyperidroses.

Hyperidrosis idiopathica.

Second Family.—Paridroses.

Chromidrosis.
Bromidrosis.
Hæmatidrosis.
Uridrosis.

Third Family.—Anidroses.

Anidrosis idiopathica.

[1] Hyperplasia of connective tissue [Auspitz].

[2] From Greek κρύπτη, crypt, follicle.

[3] Classes, Orders or Families marked (A) are the same as in Auspitz's classification.

B.—Organic.

First Family.—Crypto-stenoses (including *Parasteatoses* [A]).

Comedo.
Milium.
Atheroma cutis.
Acrochordon.
Amyloid milium (Molluscum contagiosum). (?)
Colloid milium.

Second Family.—Inflammatory Cryptoses.

1. Acne:
   A. papulosa.
   A. pustulosa.
   A. indurata.
   A. atrophica.
2. Lichen scrofulosorum.
3. Sycosis vulgaris.
4. Hydrosadenitis.

CLASS IV.

Angio-Desmoses[1] of the Skin.

Trophic diseases of the corium and subcutaneous connective tissue dependent on derangement of the cutaneous blood- or lymph-vessels.

First Family.—Chronic angio-desmoses due to lymphatic or venous engorgement.

Hypertrophic;
Elephantiasis (Arabum).
2. Atrophic;
   a. Diffuse;
   Sclerema neonatorum,
   Sclerema adultorum (sclerodema).
   b. Circumscribed;
   Morphœa.

Second Family.—Acute or Phlegmonous Angio-desmoses due to Engorgement.

1. Erysipelatous dermatoses:
   a. Circumscribed;
      α. of veins—Phlebitis cutis.
      β. of lymphatics—Lymphangitis cutis.
   b. Diffuse, especially involving lymphatics;
   Erysipelas:
      α. Superficial, involving cutis and epidermis;
      Erysipelas simplex.
      β. Involving cutis and subcutaneous tissue;
      Erysipelas phlegmonosum.
      γ. Chiefly situated in subcutaneous tissue;
      Cellulitis (pseudo-erysipelas).
2. Furunculous dermatoses:
   a. Simple;
   Furunculus (idiopathic and neuritic),
   Anthrax simplex.
   b. Virulent (erysipelato-furunculous);
   Anthrax contagiosus:
      α. Pustula maligna.
      β. Œdema malignum.

Third Family.—Necrotic Dermatoses.

Characterized by vascular stasis.

1. Gangrenous;
   a. Idiopathic forms:
   Gangræna calorica.
      α. Dermatitis ambustionis escharotica.
      β. Dermatitis congelationis escharotica.
   Gangræna per decubitum.
   Gangræna senilis, etc.
   b. Neuropathic forms:
   Gangræna neurotica from Raynaud's disease.
   Decubitus acutus.
2. Ulcerative;
   a. Simple forms:
   Ulcus simplex (varicosus, etc.).
   b. Neuropathic forms:
   Malum perforans pedis.
   c. Specific forms:
   Chancre.

[1] From Greek δεσμός, a band (and so connective tissue).

Class V.

Idioneuroses[1] of the Skin (A).

Functional diseases of the cutaneous nerves, without trophic changes in the skin.

A. SENSORY NEUROSES OF THE SKIN.

First Family.—Neuroses of the Tactile Sense. (*Æsthesionosi of the Skin.*)

Hyperæsthesia cutis. Paræsthesia cutis.

Anæsthesia cutis.

Second Family.—Neuroses of Common Sensation of the Skin. (*Dermatalgiæ.*)

1. Painful
   Neuralgia cutis.
2. Pruritic
   a. As pure sensory neurosis.
   Pruritus cutaneus.
   b. Sensory combined with motory neurosis (spasmodic contraction of *arrectores pilorum*).
   Prurigo.

B. PURE MOTORY NEUROSES OF THE SKIN.

A single family *Dermatospasmus.*

Cutis anserina.

Class VI.

Epidermidoses.

Anomalies of growth of the epidermis and its appendages.

First Order.

KERATOSES OF THE SKIN.

First Family.—Hyperkeratoses.

1. Lichen pilaris (seu follicularis). I. cornea (including I. hystrix).
2. Ichthyosis; I. follicularis,
   I. simplex, I. congenita.

Second Family.—Keratolyses.

Pityriasis simplex.

Second Order.

TRICHOSES (A).

First Family.—Hypertrichoses.

Hypertrichosis congenita.

Second Family.—Paratrichoses.

Trichorrhexis nodosa. Trichoptilosis.

Third Family.—Atrichoses.

1. Diffuse; 2. Circumscribed;
   Alopecia diffusa { simplex. / pityrodes. } Alopecia areata.

Third Order.

ONYCHOSES (A).

First Family.—Hyperonychoses.

Hyperonychia.

Second Family.—Paronychoses.

Onychogryphosis idiopathica.

[1] From Greek ἴδιος, proper, and νεῦρον, nerve; signifying neuroses pure and simple.

Third Family.—Onycholyses.

Onycholysis idiopathica.

Fourth Order.

ACANTHOSES.

First Family.—Hyperacanthoses.

1. Pure:
   Verruca,
   Condyloma acuminatum.
2. Associated with marked hyperkeratosis;
   Cornu cutaneum (including keratoma palmare et plantare hereditarium [Unna[1]]),
   Tyloma,
   Clavus,
   Fibro-acanthoma cornificans [Unna].

Second Family.—Paracanthoses (*Alveolar Acanthomata*) (A).

1. With distinct cornification of the new-formed cells;
   Epithelioma:
   E. superficiale,
   E. profundum.
2. Without cornification of the new-formed cells;
   Carcinoma cutaneum:
   C. molle,
   C. colloides,
   C. melanodes.

Fifth Order.

CHROMATOSES OF THE SKIN.

First Family.—Hyperchromatoses (A).

1. Congenital;
   Nævus pigmentosus.
2. Acquired;
   Lentigo,
   Chloasma.

Second Family.—Achromatoses (A).

1. Congenital;
   Albinismus *a.* partialis.
   b. universalis.
   Poliosis.
2. Acquired;
   Vitiligo,
   Canities præmatura.

CLASS VII.

Desmoses[2] of the Skin. (Chorio-Blastoses[3] [Auspitz].)

Anomalies of growth of the corium and subcutaneous connective tissue.

A.—Excessive development of the connective tissue of the skin.

HYPERDESMOSES.

Macrosomia.

B.—Paratypical growth of the connective tissue of the skin.

PARADESMOSES.

First Family.—Granulomata of the Skin [Auspitz]. (*Chronic Infectious*] *Dermatoses* [Neisser]).

1. Lupus:
   L. maculosus,
   L. exfoliativus,
   L. exulcerans,
   L. serpiginosus.
2. Tuberculosis cutis.
3. Scrofuloderma tuberculosum.
4. Syphiloderma:
   S. initiale,
   S. papulosum,

[1] "Vierteljahrsch. f. Derm u. Syph.," x., 1883, p. 231.

[2] From Greek δεσμός, a band (and so connective tissue).

[3] From Greek χόριον, corium, and βλαστάνειν, to grow.

S. tuberculosum,
S. gummosum.
5. Lepra cutanea.
6. Frambœsia (including yaws and dermatitis papillaris capillitii [Kaposi]).
7. Rhinoscleroma.
8. Granuloma fungoides.

Second Family.—Desmomata of the Skin (A).

1. Fibroma cutis.
   a. Disseminatum (pendulum).
   b. Keloides.
2. Osteoma cutis.
3. Chondroma cutis.
4. Lipoma cutis.
5. Myxoma cutis.
6. Hyaloma cutis.
7. Xanthoma cutis.
8. Myoma cutis.
9. Neuroma cutis.
10. Angioma cutis.
    a. Phlebangioma } Varieties: simplex, cavernosum.
    b. Lymphangioma }
11. Sarcoma cutis.

C.—Atrophy or defective development of the connective tissue of the skin.

ADESMOSES.

1. Liodermia neuritica (glossy skin).
   Liodermia essentialis (xeroderma pigmentosum).
   Liodermia syphilitica.
2. Striæ atrophicæ cutis.

CLASS VIII.

Dermatomycoses (A).

Diseases of the skin and its appendages due to vegetable parasites.

First Family.—Mycosis Scutulata (Favus).

1. Dermatomycosis favosa.
2. Trichomycosis favosa.
3. Onychomycosis favosa.

Second Family.—Mycosis Circinata (Ring-worm).

Dermatomycosis circinata.
   a. D. maculo-vesiculosa.
   b. D. diffusa (imbricata [Manson]).
2. Trichomycosis circinata (including sycosis parasitaria and kerion Celsi).
3. Onychomycosis circinata.

Third Family.—Mycosis Furfuracea.

Dermatomycosis furfuracea (Pityriasis versicolor).